

REMARKS/ARGUMENTS

It is submitted that the invention would not be obvious over a combination of Pieper, Mantesa and Binder within the meaning of 35 U.S.C. 103 for the reasons set forth hereinafter. It is requested that the Examiner reconsider and withdraw the rejection of the claim.

Pieper '902 discloses an apparatus and method which specifically teaches away from what the present invention intends to accomplish in that Pieper '902 does not employ a skull crucible but rather utilizes a mechanical agitator to achieve the needed amount of homogenization (see column 4, lines 13-18). The electrical coils 8 and 9 employed by Pieper '902 in the vertical passage produce only Joule's heat, and although there is a swirling action and some homogenization, it is obviously not sufficient to achieve the necessary homogenization or otherwise Pieper '902 would not employ the subsequent mechanical agitator. Accordingly Pieper '902 neither discloses the invention nor provides any suggestion that the stain be introduced either before or in a skull crucible, which would provide the sufficient amount of homogenization without the necessity for a mechanical agitator due to the violent currents produced within the skull crucible.

Although the apparatus disclosed in Pieper includes electrodes 8 and 9, which requires additional investment and operation costs, the use of such electrodes does not achieve the desired result of good mixing and homogenization of the melt and stain. The downstream mechanical mixture is proof of this. So what then does Mantesa offer in terms of guiding one of ordinary skill in the art to solve the problem of good mixing and homogenization of a melt and stain? Not only is Mantesa absolutely quiet regarding adding a stain to the melt but does not even discuss the mechanism by which good mixing and homogenization can be achieved, namely, fast convection rolls resulting from high temperature gradients within a skull crucible. Mantesa only discloses that conduction heated vessels provide several advantages over devices heated with electrodes, for example, that the glass melt does not come into contact with the heating source, shorter resonance times, small vessels, etc. But none of these are directed toward solving the problem at hand which is the mixing and homogenization of the melt and stain. Thus, there is no teaching, suggestion or motivation to make the combination to solve the problem in question, and the combination could be obvious only through hindsight provided by applicants' disclosure.

Although Binder discloses a skull device, there is nothing in Binder that suggests the invention as defined by the claims. Binder is not even concerned with mixing stain in a glass melt.

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New Claim 13 is the same as method Claim 1 with the additional limitation specifically reciting that the melt and stain are subjected to convection currents in the skull device to cause mixing and homogenization thereof.

For the reasons set forth above, it is submitted that all of the claims are patentable over the prior art. It is requested that the Examiner reconsider and withdraw the rejections and pass the application to issue. However, if the Examiner believes that it would be of assistance in expediting prosecution of the application, it is requested that he telephone the undersigned at 260-460-1692.

Respectfully submitted,

John F. Hoffman
Registration No. 26,280

Attorney for Applicants

JFH/nw

BAKER & DANIELS
111 East Wayne Street, Suite 800
Fort Wayne, IN 46802
Telephone: 260-424-8000
Facsimile: 260-460-1700

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I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on: July 26, 2005

JOHN F. HOFFMAN, REG. NO. 26,280

Name of Registered Representative

Signature

July 26, 2005

Date